

an amplifier device that drives the loudspeaker with a driving voltage; a providing section that provides a control voltage corresponding to a level of the driving voltage of the loudspeaker; and

a feedback device having a variable feedback gain that performs a positive feedback of a signal corresponding to the driving voltage of the loudspeaker to an input of the amplifier device with a variable feedback gain, thereby causing the amplifier device to generate a negative impedance effective to negate the internal impedance of the loudspeaker, the feedback device comprising a voltage-controlled amplifier having the variable feedback gain and receiving the signal corresponding to the driving voltage, the voltage-controlled amplifier being responsive to the control voltage and the signal corresponding to the driving voltage for generating an output signal and positively feeding back the output signal to the input of the amplifier device to thereby perform the positive feedback, wherein

an adjustment device that the voltage-controlled amplifier decreases the variable feedback gain of the feedback device as a level of the driving control voltage of the loudspeaker increases, thereby adjusting the amplitude-frequency characteristic of the amplifier device, only if the level of the control voltage exceeds a critical level, and otherwise keeps the variable feedback gain constant as long as the level of the control voltage remains under the critical level.

2. (Currently Amended) The audio apparatus according to claim 1, wherein the adjustment device providing section comprises a detector that detects the signal corresponding to the driving voltage in terms of a load voltage of the loudspeaker, and a converter that converts the detected load voltage to the control voltage, and wherein the feedback device comprises a voltage-controlled amplifier connected between the converter and the amplifier device, and having the variable feedback

~~gain responsive to the control voltage from the converter to perform the positive feedback to the amplifier device.~~

3. (Canceled)

4. (Currently Amended) The audio apparatus according to claim 1, wherein the ~~adjustment device~~ voltage-controlled amplifier decreases the variable feedback gain of the feedback device as the level of the control voltage increases so as to suppress the amplitude-frequency characteristic of the amplifier device, thereby preventing an output of the amplifier device from clipping.